

Wildlife Resources Section

stream acidity. An additional 29 tributaries in the Middle Fork of Tygart Drainage and two tributaries of Blackwater River (Beaver Creek and North Fork) were treated in cooperation with the Division of Environmental Protection (DEP). Wildlife Resources also assisted Plum Creek (formerly The Timber Company) with treatment of the South Fork of Cherry River and two of its tributaries plus three tributaries of Gauley River. These treatments restored or improved trout populations in approximately 225 miles of stream. Staff provided technical assistance to DEP for the treatment of Laurel Run of Cherry and also provided technical assistance to Trout Unlimited regarding treating acid streams.

Limestone Drum Treatment

The limestone drum neutralization stations on Blackwater River (DEP funded), Otter Creek and North Fork and Dogway Fork of Cranberry were operated. These stations are successfully neutralizing acidic flows in about 50 miles of stream. Trout reproduction has occurred in all four streams.

Mussels

Staff conducted a water quality and mussel habitat assessment of the Monongahela River. Water quality was collected and analyzed at 13 sites once a month from June through October, and 10 sites were surveyed for mussels and mussel habitat. A final report was submitted to the National Fish and Wildlife Foundation and presentations were presented at the Tri-state Fisheries Conference and the WV Chapter of the American Fisheries Society.

Staff investigated reports of mussel kills on the Cacapon River and North Fork Hughes, coordinated with the USFWS, and U.S. Army Corps of Engineers with respect to maintenance dredging operations and disposal of dredge material in relation to mussel beds on the Ohio and Kanawha rivers, conducted a half-day workshop on mussel identification and ecology, provided training to 13 Wildlife Resources employees, nine Department of Transportation (DOT) employees and one federal highways employee, coordinated with DOT on bridge projects and made several site reviews, assisted with zebra mussel monitoring on the Ohio River, continued assistance with the Ohio River and Tug Fork mussel kill analysis and continued preparation of the *Mussels of West Virginia* book and key.

Technical Support Unit

Aquatic Habitat Conservation

Personnel from the Technical Support Unit were very active during the year coordinating and participating in efforts to assess and restore aquatic habitats in the state. Staff attended training courses in natural stream channel design, participated in the field reconnaissance of degraded streams, developed and submitted grant applications for inventory and research projects, and coordinated the implementation of such projects.

Coordination was provided for an array of Wildlife Resources Section activities focused upon the restoration of the Shavers Fork watershed. Using funding from the National Fish and Wildlife Foundation, Trout Unlimited and others, a project to collect sediment data, stream morphology and land use data on the Upper Shavers Fork was initiated.

Coordination continued on an expanded state effort to restore streams damaged by acid precipitation and acid mine drainage.

Planning

The planner continued to coordinate the revision of the Wildlife Resources Section Strategic Plan. This process is integrated with planning for expenditure of expanded federal reimbursement for fish and wildlife management activities. Financial planning for the Wildlife Endowment Fund was another area of significant emphasis during the year.

Coordination

Coordination continued on the following U.S. Army Corps of Engineers projects: Winfield Locks and Dam Rehabilitation Mitigation Project, Marmet Locks and Dam Rehabilitation, Bluestone Dam Safety Assurance Project, Bluestone Dam Hydropower Development Study, Greenbrier River Flood Damage Control and London Locks and Dam Rehabilitation.

Continued action (e.g., impact analysis, development of mitigation, appeals, litigation, relicensing) was taken on each of the following proposed or licensed hydropower

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projects at reservoirs or locks and dams: Hannibal, R. C. Byrd, Belleville and New Cumberland on the Ohio River, Summersville on the Gauley River and Dam Sites 4 and 5 on the Potomac River.

Coordination continued on the Canaan Valley and Ohio River Islands National Wildlife Refuges and the Ohio and Kanawha Rivers Mainstem Navigation Studies.

The Coordination Program continued participation in the NEPA process for the following highway projects: Corridor H - Elkins Bypass, Coalfields Expressway, Corridor H - Elkins to VA Line, New River Parkway, Corridor D - Parkersburg, Shawnee Highway, Coalfields Expressway, King Coal Highway, WV Rt. 35, and numerous other small highway improvement projects.

One Natural Resource Conservation Service (NRCS) Impoundment Flood Control/Water Supply Project was coordinated on the Upper Tygart River Watershed Project. DNR involvement with a cooperative Natural Stream Restoration project on Horseshoe Run in Tucker County continued. Significant time was spent coordinating the Conservation Reserve Enhancement Program with state and federal agencies. The program will pay landowners to protect riparian areas along streams and develop wildlife management plans on their property. This program is part of the Food Security Act/Farm Bill. Significant time was spent coordinating with the NRCS and SCA on post-flood stream restoration efforts in the state.

Significant time continued to be spent implementing the Clean Water Act Regional Permit to assist landowners with small stream restoration and management. Approximately 1,000 requests for assistance have been received and reviewed since the project's inception.

The Randolph/Tucker Project Impact Task Force activities were suspended due to lack of funding. The task force was funded for five years by a Federal Emergency Management Agency grant with a goal of county disaster prevention through citizen awareness and advance mitigation.

Technical assistance relative to fish and wildlife was provided to the WV Division of Environmental Protection's mitigation development program. Biologists continued to review surface mine permit applications and develop wildlife habitat plans. In addition, assistance was provided to the Wildlife Heritage Database with 122 mine preplan reviews. Significant time continues to be spent working with the Abandoned Mine Lands program reviewing sites for required environmental permits. Biologists continued to provide technical assistance and fish and wildlife information to the agencies that developed the Environmental Impact Statement for Mountain-Top Mining.

Approximately 447 miscellaneous additional actions were coordinated. They include Clean Water Act Section 404/10 permits; highway reviews, wetland and stream permit reviews and Natural Resources Conservation Service/State Conservation Agency project reviews. Time continues to be spent on various task forces developing statewide and regional flood protection plans.

Biometrics

Routine installation, maintenance and support of computer hardware, software and peripherals for all Wildlife Resources Section's offices were provided.

Geographic Information System (GIS) staff provided training to DNR, West Virginia Division of Forestry and Federal agency users on GIS development and application, data acquisition and procedures and Global Positioning Systems (GPS). A GPS collection, processing and organizing procedure was developed to assist GPS tracking activities for Section projects incorporating well-documented and accurate locations of field surveys.

As part of the contract with the West Virginia Division of Forestry, special request maps, mapping and analyses were prepared or conducted. In addition, GIS datasets were developed to access the impact of forest fires on the flora and fauna of forest communities, estimate future fire risks and establish potential impact on wildlife in the state.

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The unit continued the development of spatial and aspatial data sets for selected wildlife management areas. GIS mapping was continued on a limited number of wildlife management areas. GIS/GPS consultation and database development services were provided to various federally assisted rare, threatened and endangered species studies, spring frog call surveys and rattlesnake telemetry studies. GPS training was provided to Game Management Unit staff and other biologists, and common data libraries were maintained.

The GIS-based stream survey database, public notice database and harvest database were maintained. The development of a public access sites (PAS) database was reinitiated; coordinates and descriptive data for 267 PASs have been collected. Coordination between District Fisheries Biologists and GIS staff has been beneficial to this project.

GIS staff completed the creation of a trout stocking GIS database compliant with the National Hydrologic Dataset. This information is intended to be provided to the general public through the Section's web page

A three-year EPA cooperative project to evaluate the intermediate and long-term ecological and hydrologic effects of West Virginia's Section 401 actions and mitigation conditions continued. Fish and benthos were collected, substrates were analyzed and stream morphology and hydrology were collected as part of this project. Two projects, one to evaluate the functionality of wetlands created to mitigate for damage to natural wetlands resulting from development and another to assess and quantify environmental value of island back-channel areas in the Ohio River, were completed. GIS staff mapped 11 sites and electro-fished three of these sites for the 2003 field season.

The Unit was awarded an EPA cooperative agreement to create a wetland-based Geographic Information System, including data development and deployment and repository network for wetland information in West Virginia. Through the project, GIS application and file servers have been installed. The project is expected to be completed by March 2004.

GIS staff has developed preliminary datasets for a project to Assess Riparian Conditions in Gauley River National Recreation Area and a project to assist a Habitat Conservation planning effort emphasizing flying squirrel and Cheat Mountain salamander habitat on private lands near Blackwater Falls State Park.

Annual routine projects supported included managing the Section's work report system, producing game harvest and trout stocking summaries, summarizing spring gobbler survey results, summarizing the goose cooperators survey, summarizing bowhunter survey results, processing boar, fall wild turkey and antlerless deer applications for eligibility cards, compiling trophy fish citations, summarizing statewide hunter prospects and mast surveys, summarizing accomplishments for game management and preparing federal aid vouchers and monthly summaries for all projects. Work time and cost reporting services were provided to the Law Enforcement Section.

A project to serve selected data over the Internet was continued. The project provides selected users with access to maps developed by the agency and will allow these clients to secure data on distributions of selected West Virginia species, work report system materials, publications and various project proposals, reports and data.